CLAIMS:

1. A voice control system for operating home electrical appliances, said system comprising:

a home agent server (HAS) adapted to be installed in a house and connected to the home electrical appliances for controlling the operation of the same;

a microphone and a speaker linked to said home agent server through an in-house network;

a voice recognition means which recognizes a user's voice request received at the microphone,

a transaction processing program (TP) executable at the HAS to manage the home electrical appliances, said TP program having an instruction interpreting module which prepares from the voice request a particular instruction indicating a destined appliance and a method for controlling the destined appliance, and provides an output command for controlling the destined appliance in accordance with the particular instruction.

2. The system as set forth in claim 1, wherein
said output command is a control signal which controls the destined appliance for control thereof.

3. The system as set forth in claim 1, wherein

said TP program is written into a mobile agent program which is capable of moving from the HAS to a local computer terminal included in the destined appliance in response to said output command such that it can be executed thereat for control of the destined appliance.

4. The system as set forth in claim 3, wherein

said TP program includes a migration module which analyzes the particular instruction to seek an associated address of said destined appliance, and moves the TP program itself to the local computer terminal of said destined appliance.

5. The system as set forth in claim 3, wherein

said TP program includes a voice recognition module defining said voice recognition means.

6. The system as set forth in claim 5, wherein

one of said TP program and said HAS includes:

a text composer module providing a text associated with a particular control of the electrical appliance; and

a speech synthesis module which converts the text into a voice message to be issued from said speaker for confirmation of the acceptance of the user's

voice request and/or the completion of the requested control.

7. The system as set forth in claim 4, wherein

said HAS is provided with a communication interface for linking the HAS to said in-house network as well as to an outer information network such as the Internet for intercommunication with other sites linked through the information network,

said HAS further including an address list storing addresses of the appliances and sites which are sought by the MAP running on the HAS to designate a destined appliance or site where an intended process demanded by the user's request is to be executed,

said migration module allowing to move the MAP itself to the destined appliance or site for execution of the MAP thereat to achieve the intended process demanded by the user's request.

8. The system as set forth in claim 6, wherein

said HAS is linked to a plurality of human presence sensors which are adapted to be installed in different rooms of the house so as to provide a detection signal indicative of a particular one of the rooms where the user is present,

one of said TP program and said HAS further including a room locating module which identifies the particular room with reference to the detection signal, and instructs to issue the voice message from the speaker belonging to

thus identified room.

9. The system as set forth in claim 2, wherein

one of said TP program and said HAS further includes a voice locating module which judges a place of the user issuing the user's voice request received at the microphone, and instructs to issue the voice message from the speaker belonging to the thus located place.

10. The system as set forth in claim 1, wherein

said HAS includes a personal information table storing a relation between individual users and the appliances allocated to be accessible by the individual users,

said TP program further including:

a user identification module which identifies a particular user from the user's voice request,

an access permission module which selects the appliance allocated to the identified user with reference to the personal information table and limits the TP program to the execution for the allocated appliance.

11. The system as set forth in claim 1, wherein

said system includes a plurality of dedicated transaction processing (TP) programs which are allocated respectively to individual users for limiting one or

more of the appliances accessible by the users,

said HAS including a user identification module which identifies the user from the user's voice request, selects one of the dedicated TP programs allocated to the identified user, and allows the dedicated TP program to be executed.

12. The system as set forth in claim 3, wherein

said system includes a plurality of dedicated transaction processing (TP) programs which are allocated respectively to individual users for limiting one or more of the appliances accessible by the users,

said HAS including a user identification module which identifies the user from the user's voice request, selects one of the dedicated TP programs allocated to the identified user, and allows the dedicated TP program to move to the destined appliance so as to be executed thereat.

13. The system as set forth in claim 3, wherein

said HAS includes said voice recognition means.

14. The system as set forth in claim 13, wherein

said HAS further includes:

a text composing means providing a text associated with a particular control of the electrical appliance;

a speech synthesis means which converts the text into a voice message to be issued from said speaker for confirmation of the acceptance of the user's voice request and/or the completion of the requested control.

15. The system as set forth in claim 1, wherein

said HAS is provided with a communication interface for linking the HAS to an outer information network such as the Internet for intercommunication with sites linked through the information network,

said HAS including a site address list storing addresses of the sites which are referenced by the TP program to seek a destined site where an intended process demanded by the user's request is to be executed, whereby the TP is executed to communicate with the destined site for obtaining services provided by the destined site.

16. The system as set forth in claim 6, wherein

said system further includes a personal computer equipped with a display in addition to the microphone and the speaker,

said personal computer being linked to the HAS through the in-house network for transmitting the user's request received at the microphone to the TP program running on the HAS,

said TP program having a function of transmitting the text provided by said text composer module to the display of the personal computer.

17. The system as set forth in claim 4, wherein

said HAS has a phone interface to a public telephone network for intercommunication with a mobile phone,

said mobile phone carrying a specific transaction processing (TP) program which is a mobile agent program capable of moving from the mobile phone to said HAS or said local computer terminal to be executable thereat,

said specific TP program, when running on the mobile phone, accepting a user's voice request at the mobile phone for managing said appliances,

said specific TP program including:

a voice recognition module which recognizes a user's voice request received at the mobile phone,

an instruction interpreting module which prepares from the voice request a particular instruction indicating a destined appliance and a method for controlling the destined appliance; and

a migration module which, in response to the particular instruction, moves the specific TP program to said HAS or said local computer terminal for achieving the method for the destined appliance.

18. The system as set forth in claim 1, wherein

said microphone and speaker are mounted in a switch box which is installed in the house.

19. The system as set forth in claim 1, wherein said microphone and speaker are mounted in a ceiling receptacle installed in the house for connection with a lighting fixture.

20. The system as set forth in claim 1, wherein said microphone and speaker are mounted in a lighting fixture defining the home electrical appliance.

21. The system as set forth in claim 1, wherein

said HAS is packed into a home information and power distribution center which is provided with:

a distributor connected between a utility line and in-house branched power lines leading to the appliances;

a telephone interface for connection between a in-house telephone line and a public telephone network; and

an information interface for connection between an in-house information network and an external information network,

said in-house network being realized by said power lines which allows the output command to be transmitted therethrough.